

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated February 4, 2011 has been received and its contents carefully reviewed.

Claims 1 and 9 are hereby amended. Claims 6, 7, 10, and 13 are canceled without prejudice or disclaimer. Support for the claim amendments can be found, for example, at Specification, page 11, lines 1-6. No new matter has been added. Accordingly, claims 1-5, 8, 9, 11, and 12 are currently pending. Reexamination and reconsideration of the pending claims are respectfully requested.

The Office Action rejects claims 1-5, 7, and 8 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,811,806 to Droski (*Droski*) in view of U.S. Patent No. 5,092,959 to Orie et al. (*Orie*). Claim 7 is canceled, so the rejection of claim 7 is moot. Applicants respectfully traverse the rejection of the remaining claims.

To *establish prima facie* obviousness of a claimed invention, all the elements of the claim must be taught or suggested by the prior art. The combined teaching of *Droski* and *Orie* fails to teach or suggest all the elements of claims 1-5 and 8, and thus cannot render these claims obvious.

Amended claim 1 recites “a cathode catalyst solution spray nozzle ... configured to spray the supplied cathode catalyst solution to one side of an electrolyte membrane; and an anode catalyst solution spray nozzle ... configured to spray the supplied anode catalyst solution to the other side of the electrolyte membrane, wherein the cathode and anode catalyst solution spray nozzles operate to alternately spray the catalyst solution, and wherein the carrying gas preheater heats the carrying gas at a temperature higher than the boiling points of the cathode catalyst solution and the anode catalyst solution.” *Droski* fails to teach or suggest at least these elements of claim 1. *Droski* discloses that supplying “steam to all of the nozzles aids in the atomization of the liquid lubrication compound sprayed from the activated nozzles 184 and aids in controlling the confining the spray pattern to the desired area.” *Droski*, column 11, lines 27-31. In other words, *Droski* discloses spraying the liquid lubrication compound from the nozzles

at the same time. The Office also admits that “Droski does not disclose ... a heater for heating a carrying gas.” Office *Action*, page 2.

Orii does not cure the deficiencies of *Droski*. *Orii* is also silent with respect to the above-recited elements of claim 1. For example, *Orii* discloses only one spray nozzle 10 in the main drying chamber 2. *Orii*, Figures 1-2.

Accordingly, claim 1 is allowable over the combined teaching of *Droski* and *Orii*. Claims 2-5 and 8 variously depend from claim 1, and are also allowable for at least the same reasons as claim 1. Applicants therefore respectfully request withdrawal of the rejection.

The Office Action rejects claim 6 under 35 U.S.C. §103(a) as being unpatentable over *Droski* in view of *Orii*, and further in view of JP 410113602 to Toru (*Toru*). Claim 6 is canceled, so the rejection of claim 6 is moot.

The Office Action rejects claims 9-12 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. 2005/0163920 to Yan et al. (*Yan*) in view of U.S. Patent Application Publication No. 2003/0186109 to Huang et al. (*Huang*), U.S. Patent No. 3,391,986 to Goode et al. (*Goode*), and *Toru*. Claim 10 is canceled, so the rejection of claim 10 is moot. Applicants respectfully traverse the rejection of the remaining claims.

Amended claim 9 recites spraying the preheated cathode catalyst solution through a cathode catalyst solution spray nozzle using the preheated carrying gas to one side of an electrolyte membrane; and spraying the preheated anode catalyst solution to the other side of the electrolyte membrane through an anode catalyst solution spray nozzle using the preheated carrying gas, wherein the spraying of the preheated cathode catalyst solution and the spraying of the preheated anode catalyst solution are alternately performed, and wherein in the preheating of the carrying gas, the carrying gas is heated at a temperature higher than the boiling points of the cathode catalyst solution and the anode catalyst solution.”

The combined teaching of *Yan*, *Huang*, *Goode*, and *Toru* fails to teach or suggest at least these elements of claim 9. In fact, the Office Action admits that *Yan*, *Huang*, *Goode*, and *Toru* do not “teach that the carrying gas is heated at a temperature higher than the boiling points

of the catalyst solutions.” *Office Action*, page 6. Accordingly, claim 9 is allowable over the combined teaching of *Yan*, *Huang*, *Goode*, and *Toru*. Claims 11-12 depend from claim 9, and are also allowable for at least the same reasons as claim 9. Applicants therefore respectfully request withdrawal of the rejection.

The Office Action rejects claim 13 under 35 U.S.C. §103(a) as being unpatentable over *Yan* in view of *Huang*, *Goode*, and *Toru*, and further in view of U.S. Patent Application Publication No. 2004/0126147 to Kondo et al. (*Kondo*). Claim 13 is canceled, so the rejection of claim 13 is moot.

The application is in condition for allowance and early, favorable action is respectfully solicited. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911.

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